

# Application form for the admission to the M.Sc. program in Chemistry at the University of Cologne

**! Please fill in online and print, or use black pen!**

## Personal data

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Family name	First name(s)	Date of birth (TT-MM-JJJJ)
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Place of birth	Nationality	Gender
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Street / Street number

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Postal code	City / Country
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Phone number	E-Mail address
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*Please make sure that your e-mail address is correct, as main correspondence and most information will be processed via e-mail.*

## University Bachelor degree or alternative qualifications

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Name of the bachelor / study program	Degree obtained
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University / Institution

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Matriculation number (only for students, who obtained their Bachelor degree at the University of Cologne)

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Title of Bachelor thesis

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Advisor of Bachelor thesis (title, family name, first name, university/institution)

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Date of certificate	Overall grade
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*If you have not yet finished your B.Sc. please give the expected date (marked with „expected“ and the weighted average of the grades you have received so far.*

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Referee 1 (title, family name, first name, university /institution, e-mail address)

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Referee 2 (title, family name, first name, university / institution, e-mail address)

Modules, that are still to be completed (please add expected date of examination)

1

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2

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### Credit points achieved in chemical modules of the following areas

*For each chemical area - please fill in the modules attended during your Bachelor program.*

#### Physical chemistry and theoretical chemistry

Title of the module	ECTS*
Total amount of credits	

#### Organic chemistry and biochemistry

Title of the module	ECTS*
Total amount of credits	

**Inorganic chemistry and analytical chemistry**

Title of the module	ECTS*
Total amount of credits	

**Physics, Mathematics, Statistics**

Title of the module	ECTS*
Total amount of credits	

**Others**

Title of the module	ECTS*
Total amount of credits	

**\*1 ECTS is equivalent to a total workload of 30h. Please convert your credits accordingly.**

**English language proficiency (please mark)**

- English competence test  
(TOEFL (Paper-based 580, Computer-based 237, Internet-based 93), IELTS (average 6,5 - each single component 6,0), Cambridge qualifications: B2 First (175), TOEIC (listening: 460 – reading: 425 –speaking: 175) certificate)
- German general qualification for university entrance (Allgemeine Hochschulreife)
- B.Sc. from an English taught program

Other: \_\_\_\_\_

German language skills (not subject to approval):

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## Experimental Prerequisites – SELF EVALUATION SHEET

**It is highly recommended that applicants critically self-evaluate their level of experimental expertise with respect to the given headwords.**

**☞ Application for our Master of Science program is not reasonable if the candidate realizes substantial deficits on one or more of the mentioned skills and techniques. The following skills and experimental competences are presupposed from the preceding scientific Bachelor program**

No	Competence	Experience		
		high	medium	low
1.	Safety aspects & environmental properties (risk potentials) of common solvents & reagents			
2.	Calculation of concentrations, stoichiometries, yields, and conversions			
3.	Competent performance of synthetic inorganic and organic transformations, incl. extractive work-up, product isolation and purification and characterization (NMR, MS, IR, UV, optical rotation)			
4.	Handling (and proper disposal) of organometallic and metal hydride reagents (Grignard, alkyllithium, LiAlH <sub>4</sub> ), working under inert gas, Glovebox and Schlenk-techniques			
5.	Monitoring reactions by means of TLC or GC			
6.	Proper use of reduced pressure apparatus (rotavap, oil pump with cold trap, ...)			
7.	Basic knowledge of modern techniques for characterization of solids: Electron Microscopy, Atomic Force Microscopy, X-ray Diffractometry (single crystal, powder)			
8.	<i>Practical knowledge of chemical separation and purification techniques like</i>			
	-precipitation			
	-filtration			
	-centrifugation			
	-solvent extraction			
	-column separation			
	-distillation			
	-sublimation			
	-crystallization			

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Place, date

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Signature